DOCUMENT RESUME

ED 424 536 CG 028 848

AUTHOR Wilkinson, Anna V.; Iscoe, Ira; Holahan, Charles J.
TITLE Psychological, Contextual, and Social Determinants of Safe Sex Behavior.
PUB DATE 1998-08-00
NOTE 13p.; Paper presented at the American Psychological Association Annual Convention (106th, San Francisco, August 14-18, 1998).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Acquired Immune Deficiency Syndrome; Adolescents; *Behavior Standards; College Students; *Health Promotion; Higher Education; *Sex Education; *Sexuality; *Social Behavior; Young Adults
IDENTIFIERS *Safe Sex Practices

ABSTRACT

This paper reports on a study that developed a model of sexual risk-taking behavior that included psychological measures, as well as social or demographic factors, and contextual variables. The study seeks to contribute to the knowledge based used when designing health promotion or disease prevention programs that promote safer sexual practices among young Americans. Study participants (n=613) completed an anonymous self-report survey in late 1995. The "Theory of Planned Behavior" is applied as a theoretical framework for the development of a model of sexual risk-taking behaviors that includes psychological measures as well as social and demographic factors and contextual variables. An overview of the theory and discussion of the operationalization of variables is presented. Results indicate that perceived social norms consistently predict safe sex behavior both directly as well as mediating the influence of some of the psychological variables on behavior. Therefore, promoting an environment in which safe sex is the norm appears to be a powerful means to reduce high-risk sexual behavior. Future research needs are discussed. (Author/EMK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 424 536

Psychological, Contextual, and Social Determinants of Safe Sex Behavior

Abstract

Anna V. Wilkinson Kansas Health Institute
Ira Iscoe University of Texas at Austin
Charles J. Holahan University of Texas at Austin

The current study seeks to contribute to the knowledge base used when designing health promotion or disease prevention programs that promote safer sexual practices among young Americans. Study participants completed an anonymous self-report survey in late 1995.

Using the Theory of Planned Behavior as a theoretical framework, the data were used to investigate the role of social norms when predicting safe sex behaviors. Results indicate that perceived social norms consistently predict safe sex behavior both directly as well as mediating the influence of some of the psychological variables on behavior. Therefore, promoting an environment in which safe sex is the norm appears to be a powerful means to reduce high risk sexual behavior.

Future research needs to investigate how the relationships between safe sex behavior and psychological constructs, such as sexual self-efficacy or attitudes towards condom purchase, negotiation and use, vary depending on the level of perceived normative support for condom use. In other words, refine our understanding of the social and psychological influences that promote safe sex behavior when safe sex is perceived to be the normative behavior.

CG028848

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A Wilkinson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

A review of health education programs designed to increase AIDS-preventive behaviors among different segments of the population revealed that many extant programs are not guided by research (Fisher & Fisher, 1992). In addition, many programs were designed without considering the social and psychological forces that maintain safe-sex behavior (DiClemente, 1992). Other researchers stress the important role of conducting preliminary research so as to facilitate the tailoring of intervention programs to meet the needs of clearly defined groups in the population (Hein, 1993). Evaluations of health education programs suggest that behavioral interventions that are informed by theoretical research succeed in changing individual behavior and instilling the necessary skills to maintain behavior change more frequently than health promotion programs that are not guided by such research (Berk & Rossi, 1990; Fisher & Fisher, 1992). The current research addresses these concerns by contributing to the development of theory driven and field-tested knowledge that can be used when designing health promotion and disease prevention programs.

The overall purpose of the current study was to develop a model of sexual risk-taking behavior that included psychological measures, as well as social or demographic factors, and contextual variables. At a conceptual level, the study applied the Theory of Planned Behavior, focusing on the role of perceived norms for behavior as a mediating variable on the practices of safe sex.

The Theory of Planned Behavior

Overview

The Theory of Planned Behavior (TPB: Ajzen, 1991) developed from Fishbein and Ajzen's Theory of Reasoned Action (TRA: Fishbein & Ajzen, 1975), is a deliberative processing model in which individuals make rational behavioral decisions based on the information that is available to them. The TRA combines the influence of attitudes and norms on behavior, proposing that behavior is best predicted by intention to engage in that behavior, while intention is influenced by both attitudes and norms (Ajzen & Fishbein, 1980). The TPB extends the TRA by incorporating the notion that certain aspects of volitional behavior may be beyond the perceived control of the individual. In addition, the TPB includes more distal factors, such as age, ethnicity, marital status, and other contextual factors that may impact the behavior.

Operationalization of the Theory of Planned Behavior

In the current study, the TPB was modified in two ways (see Figure 1). First, the TPB was modified so as to predict behavior--the consistent practice of safe sex--rather than intentions to practice safe sex. Fishbein and Middlestadt (1989) argue that when using the TRA as a framework from which to understand and study safer sex behaviors and behavioral change, behavior must be used as the outcome measure.

Second, in the current study, all of the psychological measures are used in a multiple logistic regression analysis to predict behavior, safe sex practices, directly. In addition, the socio-demographic, contextual, and belief variables are used to predict subjective norms, as these are factors that may influence how the individual perceives subjective norms for safe sex behaviors.

Variables

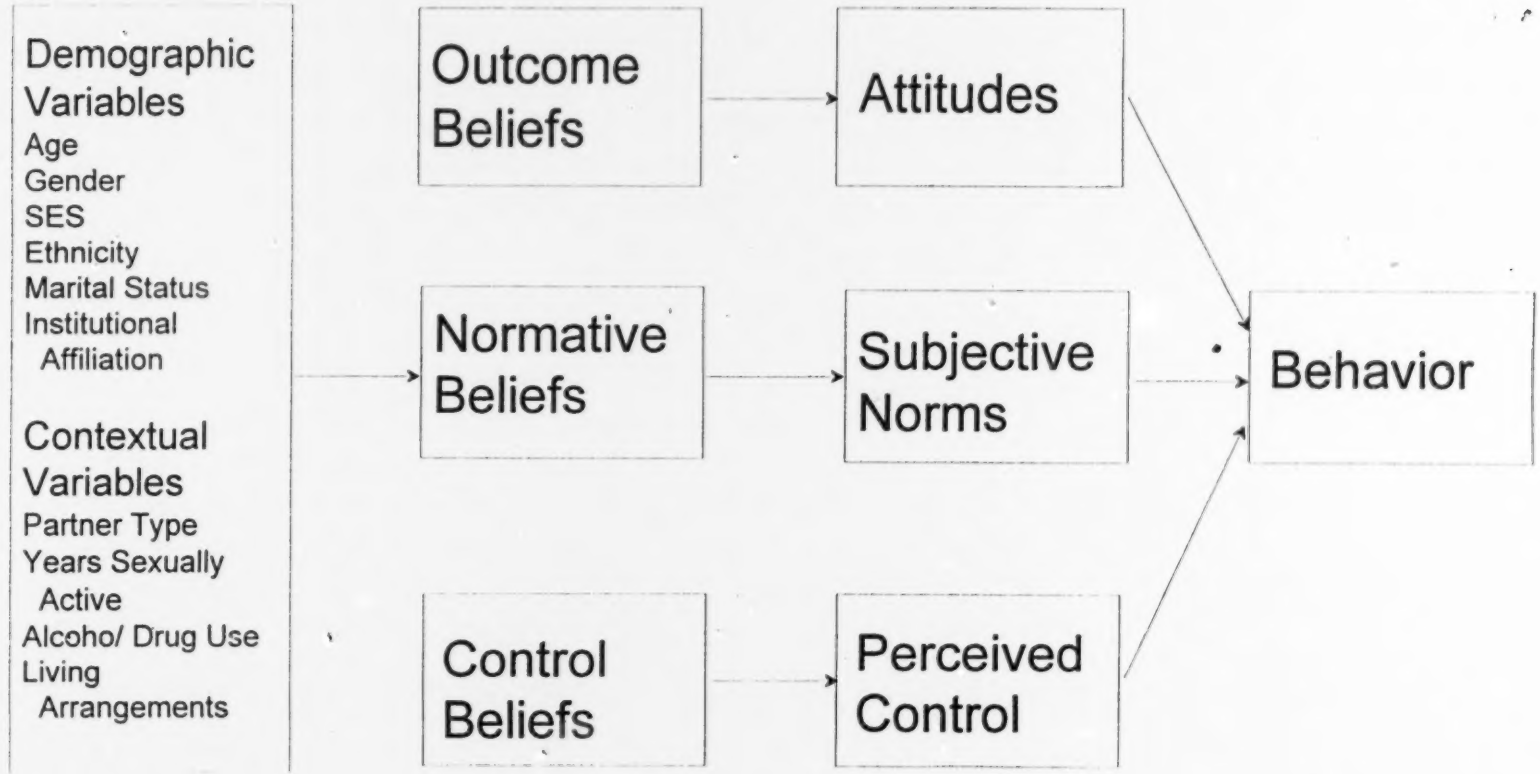
Behavior. The outcome variable in the current study was a dichotomous measure of safe sex practices. Individuals who reported engaging in one or more of the following behaviors were classified as practicing safe sex: kissing and touching, mutual masturbation, vaginal sex with a condom, receiving or giving anal sex with a condom, receiving oral sex, or giving oral sex with a latex barrier. In contrast, individuals who reported having vaginal or anal sex without concurrently using a latex barrier or who gave oral sex without using a latex barrier were classified as engaging in unsafe sexual activities.

Attitudes. Two measures of attitudes were included in the analysis. The Sexual Opinion Survey (White et al., 1977) includes 21 items that measure attitudes towards different sexual practices, attitudes towards homosexuality, and the sex industry. The measure provides an indication of how people respond and attend to sexual cues and information. Items are scored on a seven-point scale, ranging from strongly agree to strongly disagree. Cronbach's alpha for this scale was 0.88.

The second set of attitudinal items were taken from the UCLA multidimensional condom attitude scale (Helweg-Larsen & Collins, 1994). The five items measure the perceived influence of condoms on sexual pleasure. The items were scored on a seven-point scale, ranging from strongly agree to strongly disagree and were then summed. Cronbach's alpha for this scale was 0.73.

Subjective Norms. The measure of subjective norms comprised six items developed from data obtained from college students (Fisher, Misovich, & Fisher, 1992). Each item asks if the

Figure 1: Theory of Planned Behavior



5

individual feels that either a partner, or a friend, thinks that he or she should engage in three types of safer sex activities. Responses were scored on a five-point scale ranging from very true to not at all true. Cronbach's alpha for this scale was 0.82.

Perceived Control. Harlow, Morokoff, and Quina (1991) developed a scale that assesses the degree of mastery or control the respondent feels over his or her sex life. Six items provide a competence measure, while six more items provide a distress measure. The response format for all items includes never, rarely, sometimes, often, and always. Distress items were summed and subtracted from the sum of the competence items. Cronbach's alpha for this scale was 0.83.

Beliefs. Beliefs about outcomes associated with HIV were measured through five items including: "AIDS is the leading cause of death among young American adults;" "There is a cure for AIDS;" "Anybody can get AIDS;" "AIDS is a life threatening disease;" and "There is a cure for HIV infection." The items were scored as true or false, and then summed to provide an indication of how serious a health outcome the individual believed being HIV positive or having AIDS to be. In order to make the general belief specific to the individual, the resulting numerical score was then multiplied by the level of personal concern the person had about contracting AIDS. Personal concern was measured by one item, "The possibility of me catching AIDS is something I've never really thought about." Responses were scored on a five-point scale ranging from strongly agree to strongly disagree.

Normative beliefs for using condoms were measured through one item (Harlow et al., 1991), "My close friends insist on using condoms or latex barriers when they have sex." The response format for this item ranged from definitely true to definitely false, on a four-point scale.

Beliefs about the subjective likelihood of having HIV infection were measured by two items--how certain the individual was that he or she had not been exposed to HIV and how certain the individual was that his or her sex partners had not been exposed to HIV. The individual's score representing his or her subjective belief about the likelihood of having HIV infection was then multiplied by the individual's perceived ability to prevent him or herself from becoming HIV infected. Perceived ability was measured by one item, "I believe I can do things to help myself from getting AIDS." The response format for this item ranged from definitely yes to definitely no, on a four-point scale.

Contextual Variables. Four contextual variables were included in the current analysis. These included a) if the respondent lived at home with his or her parents or elsewhere (entered into the regression equations as a dummy variable); b) how many years the person had been sexually active (the number of years was truncated at 11 and entered into the regression equation as a continuous variable); c) if alcohol and or drugs were used by either partner during sexual

activity (entered into the regression equation as a dummy variable); and d) if the partner was a steady partner or not (entered into the regression equation as a dummy variable).

Socio-Demographic Variables. These variables included the respondent's age, ethnicity, household income, marital status, and school attended. Age was entered into the regression equation as dummy variables, for ages 18, 19, 20, 21, 22-30, and 30 or more years. Eighteen-year-olds served as the reference category. Ethnicity was also entered as dummy variables, for Mexican-American, Anglo-American, African-American, Asian-American, and Others. Anglo-American served as the reference category. Household income was divided into three levels and entered in the regression equation as dummy variables. The low income category included individuals whose household annual family income was below $20,000. The high income category included individuals whose household annual family income was above $50,000. The medium income category included the remaining study participants. Those in the highest income group served as the reference category. Finally, a dummy variable was created to represent institutional affiliation (school 1, school 2, and school 3), with the school where the highest rate of safe sex practices were reported (school 3) serving as the reference category.

Study Participants

In late 1995, 613 students from one of three institutions of higher education in Texas completed an anonymous self-report questionnaire.

Statistical Procedures

All statistical analyzes were conducted using SAS:pc software (SAS, 1989). First, zero-order correlations between the psychological measures were calculated (see Table 1). Second, a multiple logistic regression analysis was conducted to investigate the relation of the contextual variables, socio-demographic variables, and the three belief variables to subjective norms (see Table 2). Third, a multiple logistic regression analysis was conducted to investigate the relation of the psychological measures to behavior (see Table 3).

Results

Zero-order correlations. The practice of safe sex was significantly associated with attitudes towards sexuality, attitudes towards condoms, subjective norms and normative beliefs. Specifically, safe sexes practices were associated with norms that support safe sex, erotophobic attitudes towards sex, and the belief that condoms interfere with sexual pleasure. Erotophilic attitudes were associated with the belief that condoms do not interfere with sexual pleasure. The

belief that condoms do interfere with sexual pleasure was associated with the belief that one should practice safe sex.

Table 1: Zero-order Inter-correlations among the Psychological Measures

	Att1	Att2	SN	PBC	BE	NB	CB
Behavior	-0.1*	-0.24*	-0.23*	-0.05	0.002	-0.16*	-0.06
Sexual Opinion Survey (Att1)		0.1*	-0.02	-0.03	0.06	-0.02	0.18*
Condom Attitudes (Att2)			0.18*	0.01	-0.14*	0.08	0.10*
Subjective Norm (SN)				-0.05	-0.12*	0.39*	0.20*
Perceived Control (PBC)					0.02	-0.05	-0.14*
Beliefs x Evaluation (BE)						-0.05	-0.09*
Normative Beliefs (NB)							0.06
Control Beliefs x Power (CB)							

* statistically significant, $p < 0.01$.

Predicting subjective norms. In this model the obtained value for G ($df = 21$) was 129.77, $p < 0.01$, indicating that at least one of the covariates was significantly different from zero. Specifically the results indicate that compared to students in the reference category, students attending school 1 were less likely to believe that they should practice safe sex. Compared to students who did not use drugs or alcohol, users were less likely to believe they should practice safe sex. The more a person believed that AIDS is a serious problem, and that AIDS could affect him or her personally, the more likely s/he was to believe s/he should practice safe sex. The more a person believed that his or her friends do not use condoms, the less likely s/he was to believe that s/he should practice safe sex. The less sure the person was about his or her being HIV negative and his or her ability to stay HIV free, the less likely s/he believed that s/he should practice safe sex.

The overall goodness of fit was tested using Hosmer and Lemeshow's Goodness-of-Fit Statistic. In order to calculate the goodness-of-fit statistic for logistic regression models, the data are divided into ten roughly equal sized groups based on the estimated probabilities. Pearson's chi-square statistic is calculated to summarize the differences between the observed and expected number of observations in each group and the resulting statistic is then compared to a chi-square distribution. Probability values that are greater than 0.05 indicate that the model provides a good fit to the data while values less than 0.05 indicate a poor fit. The Goodness-of-Fit Statistic = 7.23 ($df = 8$) $p < 0.51$, indicating a good fit between the model and the data.

Table 2: Multiple Logistic Regression Predicting Subjective Norms

Variable	Parameter Estimate	Standard Error	Wald Chi-Square	p-value	Odds Ratio	95% C.I. Lower	95% C.I. Upper
Age 19	-0.3331	0.2484	1.7988	0.1799	0.717	0.440	1.166
Age 20	-0.5509	0.2960	3.4633	0.0627	0.576	0.323	1.030
Age 21	-0.4803	0.3863	1.5460	0.2137	0.619	0.290	1.319
Age 22-30	-0.1470	0.3774	0.1517	0.6970	0.863	0.412	1.809
Age 30+	-0.5976	0.6316	0.8952	0.3341	0.550	0.160	1.897
Married	0.0215	0.3790	0.0032	0.9547	1.022	0.486	2.148
Mexican-Am.	-0.2249	0.2517	0.7982	0.3716	0.799	0.488	1.308
African-Am.	-0.0324	0.5479	0.0035	0.9528	0.968	0.331	2.833
Asian-Am.	0.2586	0.5188	0.2484	0.6182	1.295	0.469	3.580
Other	-0.1488	0.3615	0.1695	0.6806	0.862	0.424	1.750
Low income	-0.1122	0.2661	0.1778	0.6733	0.894	0.531	1.506
Middle income	0.2818	0.2178	1.6738	0.1957	1.326	0.865	2.031
School 1	-0.4832	0.2324	4.3242	0.0376	0.617	0.391	0.973*
School 2	-0.1257	0.3510	0.1282	0.7203	0.882	0.443	1.755
Yrs. active	-0.0780	0.0495	2.4789	0.1154	0.925	0.839	1.019
Live at home	0.2859	0.2722	1.1032	0.2936	1.331	0.781	2.269
Drugs	-0.3800	0.1913	3.9460	0.470	0.684	0.470	0.995*
Steady partner	0.1525	0.2393	0.4060	0.5240	1.165	0.729	1.862
BE	0.0453	0.0144	9.8921	0.0017	1.046	1.017	1.076*
NB	-0.8157	0.1177	48.0470	0.0001	0.442	0.351	0.557*
CB	-0.2356	0.6900	11.6616	0.0006	0.790	0.690	0.904*

* statistically significantly different from 1 $p < 0.05$.

Predicting safe sex behavior. In this model the obtained value for G ($df = 7$) was 87.327, $p < 0.01$, indicating that at least one of the covariates was significantly different from zero. Specifically, students who were more likely to practice unsafe sex were highly erotophilic, believed that condoms interfere with sexual pleasure, believed that they should not practice safe sex, felt that they had a high degree of control over their sex lives and believed that their friends did not use condoms. The Goodness-of-Fit Statistic = 6.94 ($df = 8$) $p < 0.5431$, indicating a good fit between the model and the data.

Table 3: Multiple Logistic Regression Predicting Safe Sex Behavior

Variable	Parameter Estimate	Standard Error	Wald Chi-Square	p-value	Odds Ratio	95% C.I. Lower	95% C.I. Upper
Att1	0.1827	0.0914	3.9965	0.0456	1.200	1.004	1.436*
Att2	0.3606	0.0723	24.9069	0.0001	1.434	1.245	1.652*
SN	0.4707	0.1120	17.6656	0.0001	1.601	1.286	1.994*
PBC	0.0565	0.0143	15.5183	0.0001	1.058	1.029	1.088*
BE	0.1980	0.0145	0.0280	0.8671	1.011	0.891	1.146
NB	0.2449	0.1170	4.3794	0.0364	1.277	1.016	1.607*
CB	0.0198	0.0145	1.8660	0.1719	1.020	0.991	1.049

* statistically significantly different from 1 $p < 0.05$.

Discussion

Although the socio-demographic constitution of the three samples was very diverse, gender-based differences were found to have a stronger relationship to the descriptive psychological measures than did ethnic or institutional-based differences. In other words, men and women understand the salient issues associated with the practice of safe sex in very different ways. Men felt that they should practice safe sex, while women felt that they possessed the skills necessary to practice safe sex. However, perceived social influence was found to be the most consistent predictor of safe sex practices across all three samples and both genders.

Results indicated that the perception of behavioral norms for safe sex not only mediates the influence of some of the psychological, contextual and social variables on safe sex practices, but that these beliefs also directly related to the safe sex practices reported by the participants. When behavioral norms promote the practice of safe sex, regardless of a person's perceived ability to practice safe sex, his or her attitudes towards sexuality and condoms, ethnicity, gender or other factors, more students report that they practice safe sex than when safe sex behaviors are not perceived to be the norm.

The results also indicated that students who became sexually active after the onset of the AIDS epidemic reported using condoms more frequently than older students. Again, the younger students endorsed normative beliefs that they should practice safe sex. No direct relationship was observed between the students' perceived abilities to practice safe sex and their reported behavior.

Furthermore, perceived control over one's sex life was found to be inversely related to safe sex practices. Future research needs to investigate different contexts in which self-efficacy may influence behavior. For example, based on a subsection of the current data-set, the following types of research questions will be explored. Does the role of self-efficacy change depending on the situation--if the sexual encounter is perceived to be risky does self-efficacy then impact the person's behavior? Or do norms moderate the impact of self-efficacy on behavior--when norms support safe sex does self-efficacy then influence behavior?

Social influence is dynamic and as such represents a point of intervention. Behaviors that were the norm twenty years ago are no longer acceptable today--for example driving without a seat-belt. However, safer driving norms were not established overnight, and the degree to which they are adhered varies greatly to this day. Therefore it is important that we continue in our efforts to create an environment in which young single sexually active adults use condoms--the most effective method of preventing HIV infection via sexual intercourse--until they are in monogamous relationships. Given the predictive value of social influence on behavior, promoting an environment in which safe sex is the norm appears to be a powerful means to reduce risky sexual behaviors.

References

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50, 179-211.

Ajzen I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.

Berk, R. A. & Rossi, P. H. (1990). Thinking about program evaluation (p.8). Newbury Park, CA: Sage.

DiClemente, R. J. (1992). Psychosocial determinants of condom use among adolescents. In R. DiClemente (Ed.), Adolescents and AIDS: A generation in jeopardy (pp. 34-51). Newbury Park, CA: Sage.

Fishbein, M. & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading MA: Addison-Wesley.

Fisher, J. D. & Fisher, W. A. (1992). Changing AIDS risk behavior. Psychological Bulletin, 111, 445-475.

Fisher, J. D., Misovich, S. J. & Fisher, W. A. (1992). Impact of perceived social norms on adolescents' AIDS-risk behavior and prevention. In R. DiClemente (Ed.), Adolescents and AIDS: A generation in jeopardy (pp. 117-136). Newbury Park, CA: Sage.

Harlow, L. L., Morokoff, P. J. & Quina, K. (1991). Women's Healthy Lifestyle Survey. University of Rhode Island, Department of Psychology, NIMH grant MH 47233.

Hein, K. (1993). "Getting Real" about HIV in adolescents. American Journal of Public Health, 83, 492-494.

Helweg-Larsen, M. & Collins, B. E. (1994). The UCAL multidimensional condom attitude scale: Documenting the complex determinants of condom use in college students. Health Psychology, 83, 224-237.

SAS Institute Inc. (1989). *User's Guide: The Logistic Procedure, Version 6. 4th ed.* Cary, NC: SAS Institute Inc.

White , L. A., Fisher, W. A., Bryne, D. & Kingma, R. (1977). Development and validation of a measure of affective orientation to erotica: The sexual opinion survey. Paper presented at the Midwestern Psychological Association Meetings, Chicago, IL.